

DC-Micromotors

Precious Metal Commutation

4,2 mNm

For combination with

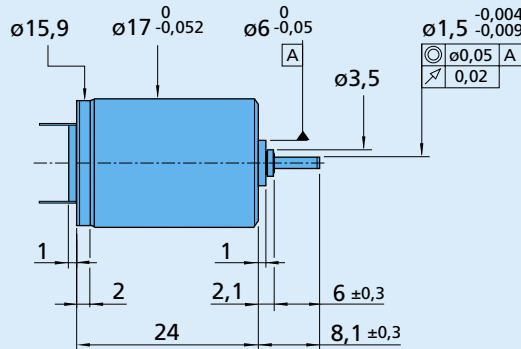
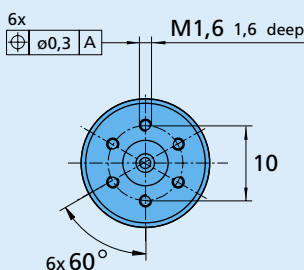
Gearheads:
15A, 16A, 16/7

Encoders:
IE2 – 16 ... 512

Series 1724 ... SR

	1724 T	003 SR	006 SR	012 SR	018 SR	024 SR	
1 Nominal voltage	U _N	3	6	12	18	24	Volt
2 Terminal resistance	R	0,78	3,41	16,20	32,10	54,60	Ω
3 Output power	P _{2 max.}	2,83	2,58	2,17	2,47	2,58	W
4 Efficiency	η _{max.}	82	81	80	81	81	%
5 No-load speed	n _o	8 200	8 600	7 900	8 400	8 600	rpm
6 No-load current (with shaft ø 1,5 mm)	I _o	0,038	0,020	0,009	0,006	0,005	A
7 Stall torque	M _H	13,2	11,5	10,5	11,2	11,5	mNm
8 Friction torque	M _R	0,13	0,13	0,13	0,12	0,13	mNm
9 Speed constant	k _n	2 760	1 450	666	472	362	rpm/V
10 Back-EMF constant	k _E	0,362	0,690	1,500	2,120	2,760	mV/rpm
11 Torque constant	k _M	3,46	6,59	14,30	20,20	26,30	mNm/A
12 Current constant	k _I	0,289	0,152	0,070	0,049	0,038	A/mNm
13 Slope of n-M curve	Δn/ΔM	621	748	752	750	748	rpm/mNm
14 Rotor inductance	L	21	75	360	710	1 200	μH
15 Mechanical time constant	τ _m	8	8	8	8	8	ms
16 Rotor inertia	J	1,2	1,0	1,0	1,0	1,0	gcm ²
17 Angular acceleration	α _{max.}	110	110	100	110	110	·10 ³ rad/s ²
18 Thermal resistance	R _{th 1} / R _{th 2}	4 / 24,5					K/W
19 Thermal time constant	τ _{w1} / τ _{w2}	2,6 / 270					s
20 Operating temperature range:		– 30 ... + 85 (optional – 55 ... + 125)					°C
– motor							°C
– rotor, max. permissible		+ 125					°C
21 Shaft bearings		sintered bronze sleeves	ball bearings	ball bearings, preloaded			
22 Shaft load max.:		(standard)	(optional)	(optional)			
– with shaft diameter		1,5	1,5	1,5		mm	
– radial at 3 000 rpm (3 mm from bearing)		1,2	5	5		N	
– axial at 3 000 rpm		0,2	0,5	0,5		N	
– axial at standstill		20	10	10		N	
23 Shaft play:							
– radial	≤	0,03	0,015	0,015		mm	
– axial	≤	0,2	0,2	0		mm	
24 Housing material		steel, black coated					
25 Weight		27					g
26 Direction of rotation		clockwise, viewed from the front face					
Recommended values							
27 Speed up to	n _{e max.}	8 000	8 000	8 000	8 000	8 000	rpm
28 Torque up to	M _{e max.}	4,2	4,2	4,2	4,2	4,2	mNm
29 Current up to (thermal limits)	I _{e max.}	1,60	0,76	0,35	0,25	0,19	A

Orientation with respect to motor terminals not defined



1724 T

